REMARKS

Claims 1, 2, and 4-8 are pending in this application. By this Amendment, claims 1 and 8 are amended. No new matter is added.

Examiner Interview

The courtesies extended to Applicant's representative by Examiner Walker at the interview held on October 12, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicant's record of the interview.

Rejections Under 35 U.S.C. §103

Claims 1, 2, and 4-8 are rejected under 35 U.S.C. §103(a) as being unpatentable over WO 02/089244 to Ibrahim *et al.* ("Ibrahim") in view of U.S. Patent Application Publication No. 2004/0038114 to Wariishi *et al.* ("Wariishi"). This rejection is traversed.

In the interview, Applicant's representative discussed several features recited in claims 1 and 8 that are novel and not obvious based on the teachings of Ibrahim and Wariishi. As discussed during the interview, neither reference teaches that "the flow amount controlling unit executes a control for supplying fuel gas to the anode in simultaneous flow from both the first supply passage and the second supply passage and varies a ratio between flow amounts passing through the first supply passage and the second supply passage when the exhaust passage is closed" as recited in claim 1 (and similarly in claim 8).

As acknowledged by the Examiner, Ibrahim only discloses an alternating flow of fuel gas through a fuel flow channel. Therefore, Ibrahim does not provide for a simultaneous flow from the first and second passage. Even though the Examiner acknowledged that Ibrahim fails to disclose this feature, the Examiner maintained his assertion that Wariishi discloses this feature thus rectifying the deficiencies of Ibrahim.

However, as discussed during the interview, Wariishi only discloses a fuel cell that is

capable of continuously changing flow direction of a fluid flowing along a surface of an electrode for keeping the electrode surface in a uniform state and of producing a high stable output of electric energy. *See* Summary of Invention. In Wariishi, when the flow direction of its fluid is changed in the anode, flow of the fluid is not stopped and an exhaust opening on the manifold always remains open. Thus, as shown in at least Figure 8 of Wariishi an exhaust opening is always open in its device. Paragraph [0023] of Wariishi further supports this assertion by stating "Switching operation from a first fluid hole to a second fluid hole is performed by starting the fluid flow in the second fluid hole while keeping the fluid flow in the first fluid hole, and then, finishing the fluid flow in the first fluid hole. Therefore, the flow is not stopped, so that the fuel cell can reliably produce a stable output." Thus, even if both Ibrahim and Wariishi were combined, an exhaust passage would be open at all times because neither reference discloses nor suggests supplying fuel gas to the anode in simultaneous flow from both the first supply passage and the second supply passage and varies a ratio between the flow amounts passing through the first supply passage and the second supply passage over time when the exhaust passage is closed as recited in claims 1 and 8.

Applicant's representative next asserted that Wariishi only relates to controlling openings of a manifold in the anode to circulate gas, and the Examiner agreed. Thus even though Wariishi discloses openings in a manifold, Wariishi fails to disclose (1) supplying a fuel gas to an anode via a first and second supply passage where the fuel gas meets via counter-directional flow in the anode and (2) supplying a fuel gas where the gas simultaneously flows from two supply passages to the anode as recited in claims 1 and 8 and as shown at least in Figures 1-3 of the pending application.

As shown in all of Wariishi's figures, its arrows flow in the same, unidirectional manner, which indicates that its fuel gas is being supplied to the manifold from a single

supply passage and not two supply passages where the gases meet in counter-directional flow as recited in claims 1 and 8. Thus, Wariishi only discloses supplying a fuel gas to an anode via one supply passage in a unidirectional manner, which is not counter-directional flow as recited in claims 1 and 8. Because Wariishi fails to disclose or suggest multiple supply passages as recited in claims 1 and 8, Wariishi also fails to disclose or suggest "supplying fuel gas to the anode in simultaneous flow from both the first supply passage and the second supply passage" as recited in claims 1 and 8. Thus, neither Wariishi nor Ibrahim disclose or suggest these features, and for these reasons, the applied references would not have rendered claims 1 and 8 obvious.

Although the Examiner did not traverse the arguments discussed above, he insisted that Wariishi could be used for the general teaching that devices such as Ibrahim can be modified to include simultaneous flow from two passages when the exhaust is closed, even though neither reference discloses nor suggests these features. Thus, the Examiner's position apparently is that the manifold openings of Wariishi can be used to teach that two fuel supplies are controlled, but that the exhaust manifold openings should be ignored with respect to the claimed feature that simultaneous flow is controlled when the exhaust passage is closed. Such a position arbitrarily uses certain teachings Wariishi while ignoring equivalent teachings and is improper in an obviousness context.

The applied references also fail to disclose or suggest actively controlling the location of the extreme downstream position of the fuel gas within the anode as recited in claims 1 and 8. As discussed during the interview, even if the references were combined, the resulting device would not be capable of controlling the extreme downstream position of fuel gas as recited in claim 1. The term "extreme downstream position" (*i.e.*, the fuel gas interface) is explicitly defined in amended claim 1. The extreme downstream position occurs where the fuel gas supplied via the first and the second supply passages meet each other in counter-

directional flow within the anode. According to claim 1, the extreme downstream position can be actively controlled to vary its location within the anode or in the exhaust passage. *See* also page 3, lines 24-30 and Figures 3A and 3B of the pending application. Although the Examiner asserted that a combination of Ibrahim and Wariishi arguably inherently discloses creating an extreme downstream position, he acknowledged that neither reference discloses nor suggests actively controlling the extreme downstream position in the anode as recited in amended claim 1.

For all of the reasons stated above, claims 1 and 8 are patentable over the applied references. Claims 2 and 4-7 depend from independent claim 1 and are therefore also patentable for at least the reasons stated above, as well as for the additional features they recite.

Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

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